

AIR QUALITY

MANAGEMENT DISTRICT

**STATEMENT OF BASIS
FOR
2nd RENEWAL OF TITLE V FEDERAL OPERATING PERMIT**

APPLICATION NO.:	<u>TV2011-10-01</u>
DATE:	<u>August 1, 2011</u>
REVIEWING ENGINEER:	<u>Felix Trujillo</u>

A. FACILITY INFORMATION

<u>FACILITY NAME:</u>	Kiefer Landfill Department of Waste Management & Recycling Municipal Services Agency
<u>LOCATION:</u>	12701 Kiefer Boulevard and Grantline Road Sloughhouse, CA 95683
<u>MAILING ADDRESS:</u>	9850 Goethe Road Sacramento, CA 95827
<u>RESPONSIBLE OFFICIAL:</u>	Paul Philleo, Director (916) 875-7011
<u>CONTACT PERSON:</u>	Tim Israel, Senior Engineer (916) 423-2637

B. PURPOSE OF THIS STATEMENT OF BASIS

The Title V Federal Operating Permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose of this Statement of Basis is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that this Statement of Basis, while based on information contained in the permit, is a separate document and is not itself an enforceable term and condition of the permit.

C. PERMIT HISTORY

This Statement of Basis is for the second renewal of the Title V Federal Operating Permit No. TV2006-10-01 issued to Kiefer Landfill on January 25, 2007. The Title V Federal Operating Permit No. TV2006-10-01 has a January 25, 2012 expiration date. The following permit actions have occurred since the initial Federal Operating Permit No. TV1996-10-01 was issued:

<u>Permit Action</u>	<u>Date</u>	<u>Permit No.</u>
Initial Title V Federal Operating Permit	01-25-2002	TV1996-01-01
1st Administrative Amendment	11-12-2002	TV1996-01-01A
1st Significant Modification	08-03-2004	TV1996-10-02
2nd Significant Modification	07-05-2005	TV1996-10-03
1st Permit Renewal	01-25-2007	TV2006-10-01
1st Significant Modification	12-31-2009	TV2007-10-02

This 2nd permit renewal will be assigned the following permit number: TV2011-10-01.

Kiefer Landfill is requesting to renew the Title V federal operating permit for its facility which was issued on 01-25-2007 and last modified on 12-31-2009.

As part of this permit renewal, Kiefer Landfill has requested that the following equipment be added to the Title V permit:

IC engine (SS2), Auxiliary on Street Sweeper, 99 hp

IC Engine (TSB), 225 hp, powering a new trommel screen,

Trommel Screen, McCloskey, model 733E powered by IC Engine (TSB)

IC Engine, Standby, powering an electrical generator

Kiefer Landfill is also requesting that the following revisions be made to the permits for the following pieces of equipment:

Landfill Gas Flares No. 1 & 2

ERCs were renewed to replace expiring NOx ERCs.

Landfill Gas Fueled IC Engines Nos. 1-5

Permits were modified to allow short-term excursions above the NOx and CO hourly concentration emission limitations during each quarter due to the non-uniform quality of landfill gas. The ROC emission factor was raised from 0.133 g/hp-hr to 0.17 g/hp-hr. Expiring NOx ERCs were renewed.

Gasoline Dispensing Facility

Expiring ROC ERCs were renewed.

IC Engine (TSA), 158 hp, powering a trommel screen

Expiring NOx, ROC, PM10 and SOx ERCs were renewed

D. FACILITY DESCRIPTION

Kiefer Landfill is an active municipal solid waste landfill located approximately 15 miles east of the City of Sacramento near the intersection of Kiefer Boulevard and Grant Line Road. The site is operated by the County of Sacramento, Municipal Services Agency, Department of Waste Management & Recycling (DWMR).

The landfill footprint, which is comprised of modules M1, M-1L and M2 through M11, is approximately 660 acres. The module M1 has no bottom liner. All other modules have or will have bottom liners and leachate collection systems. The entire landfill mass will be subject to landfill gas control similar to the system that exists in Module M1 and M1-L. The Kiefer Landfill began accepting waste into Module M1 in 1967 and began accepting waste into Module M1-L in 1994. The Module M2 began receiving waste in 2003. The final module, Module M11, is expected to complete filling operations between the years 2035 and 2060.

Decomposing waste encapsulated within the landfill produces a gas by-product that is primarily composed of methane, carbon dioxide and nonmethane organic compounds (NMOC). Landfill gas (LFG) is primarily emitted through two sources. LFG can be emitted as (1) fugitive gas through cover soils or (2) through a landfill gas collection system. At the Kiefer Landfill, the landfill gas is collected and sent to a set of two flares for destruction and/or to a set of five internal combustion (IC) engines where it is used as a fuel for the IC engines. The IC engines drive electrical generators that produce approximately 15 megawatts of electricity.

During operation of the flares and IC engines various combustion related air pollutants are released into the atmosphere. Additional particulate matter emissions are generated from construction and operation of the landfill which includes vehicle traffic on paved and unpaved roads and the handling of soil cover material.

Additional sources of air pollutants at the facility include:

1. Two trommel screens each driven by a diesel fueled IC engine used to process green waste for landfill cover.
3. Two diesel fueled auxiliary IC engines each on a street sweeper that drives the vacuum system and brushes.
4. Gasoline storage and dispensing equipment.
5. One standby diesel IC engine powering an electrical generator.

E. SIGNIFICANT EMISSIONS UNIT INFORMATION

This section describes the emission units that have a current and valid Permit to Operate from the SMAQMD and are part of the Title V Federal Operating Permit.

LANDFILL AND LANDFILL GAS COLLECTION SYSTEM

SMAQMD P/O No. 17821

The landfill is equipped with a gas collection system consisting of perimeter wells and interior wells with provisions for future expansion. Vacuum is drawn through the wells via two centrifugal blowers. The blowers move the collected landfill gas to the flare and IC engines.

LANDFILL GAS FLARE NO. 1

SMAQMD P/O No. 23110

The flare is designed to meet a non-methane organic compound destruction efficiency of 98% while operating at approximately 1600 degrees F with a residence time of 0.6 seconds.

John Zink, Model No. ZTOF, 5,000 scfm, 150 MMBTU/hr

LANDFILL GAS FLARE NO. 2

SMAQMD P/O No. 23111

The flare is designed to meet a non-methane organic compound destruction efficiency of 98% while operating at approximately 1600 degrees F with a residence time of 0.6 seconds.

John Zink, Model No. FL-156-44-E, Serial No. fl-1606, 4,000 scfm, 120 MMBTU/hr

IC ENGINE NO. 1

SMAQMD P/O No. 23112

Caterpillar, Model G3616, serial no. 4CG122, 4230 hp at 1800 rpm, landfill gas fueled, driving a 3.05MW electrical generator

IC ENGINE NO. 2

SMAQMD P/O No. 23113

Caterpillar, Model G3616, serial no. 4CG123, 4230 hp at 1800 rpm, landfill gas fueled, driving a 3.05MW electrical generator

IC ENGINE NO. 3

SMAQMD P/O No. 23114

Caterpillar, Model G3616, serial no. 4CG124, 4230 hp at 1800 rpm, landfill gas fueled, driving a 3.05MW electrical generator

IC ENGINE NO. 4

SMAQMD P/O No. 23115

Caterpillar, Model G3616, serial no. BLB00258, 4230 hp at 1800 rpm, landfill gas fueled, driving a 3.05MW electrical generator

IC ENGINE NO. 5

SMAQMD P/O No. 23116

Caterpillar, Model G3616, serial no. BLB00259, 4230 hp at 1800 rpm, landfill gas fueled, driving a 3.05MW electrical generator

E. SIGNIFICANT EMISSIONS UNIT INFORMATION (CONTINUED)
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GASOLINE DISPENSING FACILITY

SMAQMD P/O No. 20266

(1) 2,500 gallon aboveground Convault gasoline storage tank

(1) balance vapor recovery nozzle

TROMMEL SCREEN AND IC ENGINE (TSA)

SMAQMD P/O No. 19188

Powerscreen Model 830

SMAQMD P/O No. 21262

IC engine, Deutz, Model BF6L914C, serial no. 8738125, 158 hp at 2150 rpm, diesel fueled, driving trommel screen

TROMMEL SCREEN AND IC ENGINE (TSB)

SMAQMD P/O No. 22922

McCloskey Model 733E Serial No. 80169

SMAQMD P/O No. 22923

IC engine (TSB), Caterpillar/Perkins, Model 2478, serial no. 66614944, 225 hp at 2200 rpm, diesel fueled, driving trommel screen

IC ENGINE, AUXILIARY ON STREET SWEEPER (SS1)

SMAQMD P/O No. 23105

IC engine, John Deere, Model 4045TF270, serial no. PE4045T533975, 99 hp at 2500 rpm, diesel fueled, powering vacuum system and brushes on a street sweeper

IC ENGINE, AUXILIARY ON STREET SWEEPER (SS2)

SMAQMD P/O No. 21893

IC engine, John Deere, Model 4045HF280B, serial no. PE4045L074663, 99 hp at 2400 rpm, diesel fueled, powering vacuum system and brushes on a street sweeper

IC ENGINE, STANDBY POWERING AN ELECTRICAL GENERATOR

SMAQMD P/O No. 22419

IC engine, Caterpillar, Model C15, serial no. , 546 hp at 1800 rpm, diesel fueled, powering an emergency electrical generator

F. INSIGNIFICANT EMISSIONS UNIT INFORMATION

Process Description	Basis for Determination of Insignificant Emissions Unit is made based on SMAQMD "List and Criteria", Part B, Section 5 modified April 2001.
Vehicles used to transport passengers or freight	I. General criteria for insignificant activities. a. Not subject to a preconstruction permit.
Small internal combustion engines used for welders, compressors and generators.	II.B.2 Any piston-type IC engine with a manufacturer's maximum continuous rating of no more than 50 bhp.
Diesel fuel tank	II.H.1 Any equipment used exclusively for the storage of unheated organic material with: a. An initial boiling point of 302 degrees F or greater; or b. A vapor pressure of no more than 0.1 psia.
Naptha/water storage tank	II.H.3 Any equipment with a capacity of no more than 6,077 gallons used for the storage of unheated organic liquids with a vapor pressure of no more than 1.5 psia.
Small degreasers	II.O.2 Unheated, non-conveyorized solvent rinsing tanks or unheated non-conveyorized coating dip tanks of 100 gallons or less and not using a halogenated solvent.
Maintenance shop	I. General criteria for insignificant activities. a. General repair and maintenance.
Air Stripping System	I. General criteria for insignificant activities. a. Emits no more than 0.5 tons/year of a HAP or 2 tons/year of a regulated pollutant.

G. ALTERNATE OPERATING SCENARIOS

None requested by the permittee.

H. RECENT PERMIT ACTIONS

Below is a description of local permit actions that have taken place since the last update to the Title V permit.

Permit Cancellations:

The following Permits to Operate have been cancelled and their reference will be removed from the Title V permit:

Cancelled SMAQMD Rule 201 Permits to Operate			
PO No.	Date Cancelled	Equipment Description	Reason for Cancellation
16026	11/30/2007	Gasoline Dispensing Facility	Modified by P/O 20266 to renew expiring ROC ERCs.
16151	6/12/2008	LFG IC Engine No. 5	Modified by P/O 20801 to allow short-term excursions above the NOx and CO hourly concentration emission limitations during each quarter due to the non-uniform quality of the landfill gas fuel. P/O 20801 was then modified by P/O 22385 which increased the ROC emission factor from 0.133 g/hp-hr to 0.17 g/hp-hr (reviewed under Enhanced NSR). P/O 22389 was then modified by P/O 22316 to renew expiring NOx ERCs.
17331	6/12/2008	LFG IC Engine No. 1	Modified by P/O 20797 to allow short-term excursions above the NOx and CO hourly concentration emission limitations during each quarter due to the non-uniform quality of the landfill gas fuel. P/O 20797 was then modified by P/O 22385 which increased the ROC emission factor from 0.133 g/hp-hr to 0.17 g/hp-hr (reviewed under Enhanced NSR). P/O 22385 was then modified by P/O 23112 to renew expiring NOx ERCs.
17332	6/12/2008	LFG IC Engine No. 2	Modified by P/O 20798 to allow short-term excursions above the NOx and CO hourly concentration emission limitations during each quarter due to the non-uniform quality of the landfill gas fuel. P/O 20798 was then modified by P/O 22386 which increased the ROC emission factor from 0.133 g/hp-hr to 0.17 g/hp-hr (reviewed under Enhanced NSR). P/O 22386 was then modified by P/O 23113 to renew expiring NOx ERCs.

H. RECENT PERMIT ACTIONS (continued)

Cancelled SMAQMD Rule 201 Permits to Operate			
PO No.	Date Cancelled	Equipment Description	Reason for Cancellation
17333	6/12/2008	LFG IC Engine No. 3	Modified by P/O 20799 to allow short-term excursions above the NOx and CO hourly concentration emission limitations during each quarter due to the non-uniform quality of the landfill gas fuel. P/O 20799 was then modified by P/O 22387 which increased the ROC emission factor from 0.133 g/hp-hr to 0.17 g/hp-hr (reviewed under Enhanced NSR). P/O 22387 was then modified by P/O 23114 to renew expiring NOx ERCs.
19705	6/12/2008	LFG IC Engine No. 4	Modified by P/O 20800 to allow short-term excursions above the NOx and CO hourly concentration emission limitations during each quarter due to the non-uniform quality of the landfill gas fuel. P/O 20800 was then modified by P/O 22388 which increased the ROC emission factor from 0.133 g/hp-hr to 0.17 g/hp-hr (reviewed under Enhanced NSR). P/O 22388 was then modified by P/O 22315 to renew expiring NOx ERCs.
18184	4/7/10	IC Engine Driving Green Waste Grinder under P/O 18185	No longer operational. See cancellation request in Appendix F.
18185	12/6/11	Green Waste Grinder	No longer operational. See cancellation request in Appendix F.
19349	11/6/2008	IC Engine Driving Trommel Screen (P/O 19188)	Modified by P/O 21262 to renew expiring NOx, ROC, PM10 & SOx ERCs.
19704	In process	Landfill Gas Flare No. 1	Permit modified by SMAQMD Permit No. 23110 to renew expiring NOx ERCs for the LFG Air Pollution Control System.
21097	In process	Landfill Gas Flare No. 2	Permit modified by SMAQMD Permit No. 23110 to renew expiring NOx ERCs for the LFG Air Pollution Control System.

H. RECENT PERMIT ACTIONS (continued)

New Permits to Operate:

The following Permits to Operate have been issued since the last Title V update and will be incorporated into the Title V permit:

New SMAQMD Rule 201 Permits to Operate			
PO No.	Date Issued	Equipment Description	Reason for Permit
20266	11/30/2007	Gasoline Dispensing Facility	Modification of existing gasoline dispensing facility previously permitted under SMAQMD Permit No. 16026.
21262	10/01/2008	IC Engine (TSA) Powering Trommel Screen (P/O 19188)	Modification of existing IC engine previously permitted under SMAQMD Permit No. 19349.
21893	7/30/2009	Auxiliary IC Engine (SS2) on Street Sweeper	Newly installed engine.
22922	In Process	Trommel Screen	Newly installed trommel screen.
22923	In Process	IC Engine (TSB) Powering Trommel Screen	Newly installed engine.
22419	In Process	Standby IC Engine Powering an Emergency Electrical Generator	Newly installed engine.
23105	In Process	Auxiliary IC Engine (SS1) on Street Sweeper	Modification of existing IC engine previously permitted under SMAQMD Permit No. 19363.
23110	In Process	Landfill Gas Flare No. 1	Modification of existing landfill gas flare previously permitted under SMAQMD Permit No. 19704.
23111	In Process	Landfill Gas Flare No. 2	Modification of existing landfill gas flare previously permitted under SMAQMD Permit No. 21097.
23112	In Process	LFG IC Engine No. 1	Modification of existing landfill gas engine previously permitted under SMAQMD Permit No. 17331, 20797 & 22385.
23113	In Process	LFG IC Engine No. 2	Modification of existing landfill gas engine previously permitted under SMAQMD Permit No. 17332, 20798 & 22386.

H. RECENT PERMIT ACTIONS (continued)

New SMAQMD Rule 201 Permits to Operate			
PO No.	Date Issued	Equipment Description	Reason for Permit
23114	In Process	LFG IC Engine No. 3	Modification of existing landfill gas engine previously permitted under SMAQMD Permit No. 17333, 20799 & 22387.
23115	In Process	LFG IC Engine No. 4	Modification of existing landfill gas engine previously permitted under SMAQMD Permit No. 19705, 20800 & 22388.
23116	In Process	LFG IC Engine No. 5	Modification of existing landfill gas engine previously permitted under SMAQMD Permit No. 16151, 20801 & 22389.

I. FACILITY EMISSIONS

Equipment	Maximum Allowable Annual Emissions tons per year							
	ROC	NOx	SOx	PM10	CO	Single HAP	Total HAPs	GHG
Landfill	408 (A)	0	0	140 (B)	0	24.5	53	340,439
(2) Flares	70.1	87.5	90.7	27.1	445.7	0.7	2	
(5) IC Engines								
Gasoline dispensing facility	0.1	0	0	0	0	neg.	neg.	0
Trommel screen and IC engine (TSA)	0.1	0.3	0.004	0.01	0.1	neg.	neg.	155
Trommel screen and IC engine (TSB)	0.1	0.4	0.0005	0.02	0.1	neg.	neg.	264
IC engine (SS1), auxiliary on street sweeper	0.1	0.2	0.0005	0.01	0.06	neg.	neg.	116
IC engine (SS2), auxiliary on street sweeper	0.1	0.2	0.003	0.01	0.04	neg.	neg.	127.8
IC engine, powering emergency electrical generator	0.1	0.36	0.0005	0.02	0.3	neg.	neg.	60
Total Emissions	479	89	91	167	446	25 (C)	55 (C)	341,162 (D)

(A) Based on worst case emission rate of 7,857 ppm NMOC in uncollected fugitive emissions, 5,882 scfm, 24 hours/day, 365 days/year and an 85% collection efficiency for landfill gas by the landfill gas collection system.

(B) These are fugitive emissions and are not counted in the facility's Potential to Emit for Title V purposes. They are based on a worst case condition as described in Final Environmental Impact Report, March 1994, and includes emissions from (1) haul vehicles on roadways, (2) bulldozers, scrapers and compactors handling refuse and (3) windblown fugitive dust from borrow area and working face.

(C) Based on documentation in the initial Title V application.

(D) Total GHG from landfill gas (includes biogenic and non-biogenic emissions).

J. Tailoring Rule

Greenhouse Gases and the Tailoring Rule:

Background:

On May 13, 2010, EPA issued its final "tailoring" rule for greenhouse gas emissions. EPA's rule "tailors" permitting programs to limit the number of facilities that would be required to obtain New Source Review and Title V operating permits based on their greenhouse gas emissions.

Under the tailoring rule, existing facilities would trigger PSD for GHGs if their potential to emit increases by at least 75,000 tons per year of greenhouse gases, even if they do not exceed thresholds for other pollutants. Sources that have the potential to emit at least 100,000 tons of greenhouse gases per year are also be subject to Title V.

The Tailoring Rule also commits EPA to conduct additional rulemaking by July 1, 2012. The revised rule, which would apply PSD and Title V to more stationary sources, will take effect a year later. However, EPA has agreed that no new source or modification with the potential to emit less than 50,000 tpy of CO₂e will be subject to the permitting programs before April 30, 2016.

In a separate action, on July 20, 2011, EPA deferred for a period of 3 years the consideration of CO₂ emissions resulting from the combustion or decomposition of biologically-based materials when determining whether a stationary source meets the PSD and Title V applicability.

Evaluation of Applicability:

The federal regulations define "potential to emit" as "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of fuel combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable."

As shown below, under its physical and operational design, this facility could emit GHGs at levels well above the limits mentioned above, even when discounting biogenic CO₂.

Uncontrolled Emissions (excluding biogenic CO₂): This facility is permitted for handling 10,470 cfm of landfill gas. Assuming a gas composition 50% CO₂ and 50% methane, the uncontrolled potential to emit is:

$$\text{CH}_4 = 10,470 \text{ cfm} * 50\% \text{ CH}_4 * \frac{0.042 \text{ lb}}{\text{ft}^3} * \frac{60 \text{ min}}{\text{hr}} * \frac{24 \text{ hr}}{\text{day}} * \frac{365 \text{ days}}{\text{yr}}$$

$$\text{CH}_4 = 57,781.8 \text{ tons/yr}$$

$$\text{CO}_2\text{e} = 57,781.8 \text{ tons/yr} * 21 = 1,213,418 \text{ tons/yr}$$

J. Tailoring Rule (Continued)

$$\text{CO}_2 = 10,470 \text{ cfm} * 50\% \text{ CO}_2 * \frac{0.1150 \text{ lb}}{\text{ft}^3} * \frac{60 \text{ min}}{\text{hr}} * \frac{24 \text{ hr}}{\text{day}} * \frac{365 \text{ days}}{\text{yr}}$$

$$\text{CO}_2 = 158,212.2 \text{ tons/yr}$$

$$\text{CO}_2\text{e} = 158,212.2 \text{ tons/yr} * 1 = 158,212.2 \text{ tons/yr}$$

$$\text{Total CO}_2\text{e} = 1,213,418 \text{ tons/yr} + 158,212.2 \text{ tons(biogenic CO}_2) / \text{yr}$$

$$\text{Total CO}_2\text{e from landfill} = 1,371,630.2 \text{ tons/yr}$$

However, as discussed further below, when we consider the federally-enforceable restrictions the facility operates under and the current deferral of biogenic CO₂, the facility's potential to emit GHG (excluding biogenic CO₂) is below PSD and Title V applicability levels.

The existing restrictions that indirectly limit GHG emissions to levels below PSD and Title V applicability are as follows:

Landfill Emissions: This facility is subject to 40 CFR 60 Subpart WWW, which requires the installation of wells, collection of landfill gas so the methane at the surface of the landfill doesn't exceed 500 ppmv above background, and a non-methane organic compound (NMOC) destruction efficiency of 98% or greater or landfill NMOC emissions of 20 ppmvd or less as hexane at 3% O₂.

Compliance with 40 CFR 60 Subpart WWW ensures that the non-fugitive NMOC gas will be collected and destroyed by at least 98%. Assuming that the methane portion of the gas is also destroyed by at least 98%, and that GHG emissions will be the same whether burned in the flares or the engines, the landfill's potential to emit GHGs can be estimated as follows:

Non-Biogenic emissions from landfill:

$$\text{CH}_4 = 10,470 \text{ cfm} * 50\% \text{ CH}_4 * (1-.98) * \frac{0.042 \text{ lb}}{\text{ft}^3} * \frac{525600 \text{ min}}{\text{year}}$$

$$\text{CH}_4 = 1,155.6 \text{ tons/yr}$$

$$\text{CO}_2\text{e} = 1,155.6 \text{ tons/yr} * 21 = 24,267.6 \text{ tons/yr}$$

CH₄ from combustion of landfill gas (combustion of methane). Assuming a heat content of 500 Btu/scf of landfill gas:

$$\text{CH}_4 = 10,470 \text{ cfm} * \frac{0.9 \text{ g CH}_4}{\text{MMBtu}} * \frac{500 \text{ Btu}}{\text{cfm}} * \frac{1 \text{ MMBtu}}{1\text{E}6 \text{ Btu}} * \frac{525600 \text{ min}}{\text{Year}}$$

$$\text{CH}_4 = 2,476,364 \text{ g/yr} = 2.7 \text{ tons/yr}$$

J. Tailoring Rule (Continued)

$$\text{CO}_2\text{e} = 2.7 \text{ tons/yr} * 21 = 56.7 \text{ tons/yr}$$

N₂O from combustion of landfill gas (combustion of methane). Assuming a heat content of 500 Btu/scf of landfill gas:

$$\text{N}_2\text{O} = 10,470 \text{ cfm} * \frac{0.1 \text{ g N}_2\text{O}}{\text{MMBtu}} * \frac{500 \text{ Btu}}{\text{cfm}} * \frac{1 \text{ MMBtu}}{1\text{E}6 \text{ Btu}} * \frac{525600 \text{ min}}{\text{Year}}$$

$$\text{N}_2\text{O} = 275,152 \text{ g/yr} = 606.6 \text{ lbs/yr}$$

$$\text{CO}_2\text{e} = 606.6 \text{ lb/yr} * 1 \text{ ton/2000 lb} * 310 = 94 \text{ tons/yr}$$

Total non-biogenic GHGs from landfill gas:

$$\text{CO}_2\text{e} = 24,267.6 \text{ T/Y} + 56.7 \text{ T/Y} + 94 \text{ T/Y} = 24,417.7 \text{ tons/yr}$$

Total Non-Biogenic CO₂e from Landfill Gas = 24,418

Biogenic CO₂ emissions (pass-through CO₂):

$$\text{CO}_2 = 10,470 \text{ cfm} * 50\% \text{ CO}_2 * \frac{0.1150 \text{ lb}}{\text{ft}^3} * \frac{60 \text{ min}}{\text{hr}} * \frac{24 \text{ hr}}{\text{day}} * \frac{365 \text{ days}}{\text{yr}}$$

$$\text{CO}_2 = 158,212 \text{ tons/yr}$$

$$\text{CO}_2\text{e} = 158,212 \text{ tons/yr} * 1 = 158,212 \text{ tons/yr}$$

CO₂ from combustion of biogenic fuel (combustion of methane). Assuming a heat content of 500 Btu/scf of landfill gas:

$$\text{CO}_2 = 10,470 \text{ cfm} * \frac{52.03 \text{ Kg CO}_2}{\text{MMBtu}} * \frac{500 \text{ Btu}}{\text{cfm}} * \frac{1 \text{ MMBtu}}{1\text{E}6 \text{ Btu}} * \frac{525600 \text{ min}}{\text{Year}}$$

$$\text{CO}_2 = 143,161,378 \text{ Kg/year} = 157,809 \text{ tons/year}$$

$$\text{CO}_2\text{e} = 157,809 \text{ tons/year} * 1 = 157,809 \text{ tons/year}$$

Total biogenic GHGs from landfill gas:

$$\text{CO}_2\text{e} = 158,212 \text{ T/Y} + 157,809 \text{ T/Y} = 316,021 \text{ tons/yr}$$

Total Biogenic CO₂e from Landfill Gas = 316,021 Tons/Year

In addition to the landfill itself, this facility hold permits to operate for other emission units that also have the potential to emit greenhouse gases:

J. Tailoring Rule (Continued)

Permit #21893: This engine is permitted for 520 hours/calendar quarter and combusts diesel fuel at a rate of 5.5 gallons/hour.

$$\text{CO}_2\text{e} = 22.35 \text{ lb CO}_2\text{e/gal} * 5.5 \text{ gal/hr} * 520 \text{ hr/qtr} * 4 \text{ qtr/yr} = 255,684 \text{ lb/yr} = 127.8 \text{ tons/yr}$$

Permit #22419: As per engineering evaluation for ATC#22419, GHG emissions are:
 $\text{CO}_2\text{e} = 60 \text{ tons/year}$

Permit #22923: As per engineering evaluation for ATC#22923, GHG emissions are:
 $\text{CO}_2\text{e} = 132,210 \text{ lb/quarter} = 264.4 \text{ tons/year}$

Permit #23105: As per ATC#23105, GHG emissions are:

$$\text{CO}_2\text{e} = 116 \text{ tons/year}$$

Permit #21262: This engine is permitted for 439 hours/calendar quarter and combusts diesel fuel at a rate of 7.9 gallons/hour.

$$\text{CO}_2\text{e} = 22.35 \text{ lb CO}_2\text{e/gal} * 7.9 \text{ gal/hr} * 439 \text{ hr/qtr} * 4 \text{ qtr/yr} = 310,048 \text{ lb/yr} = 155 \text{ tons/yr}$$

Total CO_2e emissions from other emission units at the landfill:
 $\text{CO}_2\text{e} = 127.8 \text{ T/Y} + 60 \text{ T/Y} + 264.4 \text{ T/Y} + 116 \text{ T/Y} + 155 \text{ T/Y} = 723 \text{ Tons/Year}$

Total GHG potential to emit for the stationary source:

$$\text{Potential to Emit Non-Biogenic CO}_2\text{e} = 24,418 \text{ T/Y} + 723 \text{ T/Y} = \mathbf{25,141 \text{ Tons/Year}}$$

$$\text{Potential to Emit Biogenic CO}_2\text{e} = \mathbf{316,021 \text{ Tons/Year}}$$

J. Tailoring Rule (Continued)

Compliance Determination:

As demonstrated above, if we assume that the existing restrictions for NMOC also indirectly restrict methane emissions from the landfill, we can conclude that the facility's potential to emit (PTE) greenhouse gases (as CO₂e) is below PSD and Title V applicability levels.

The local and Title V permits will include the GHG PTE, based on existing restrictions at the facility, to demonstrate that the facility's potential to emit is below the current PSD and Title V applicability levels. By July 1, 2012, EPA will conduct additional rulemaking which is expected to lower the PSD and Title V thresholds for GHGs. If the new thresholds are higher than the established GHG PTE, the facility will continue to be considered minor for GHGs.

EPA's deferral for biogenic CO₂e will expire during the 5-year term of the Title V permit. Therefore, the Title V permit will also include the total CO₂e emissions (biogenic and non-biogenic) so there is a clear understanding of the facility's PTE for GHGs and any possible PSD and/or Title V requirements during the term of the permit.

Local permits have an indefinite lifetime; therefore, it is also prudent to include the total CO₂e emissions (biogenic and non-biogenic) in the local permits.

Both, the local permits and the Title V permits will clearly indicate that biogenic CO₂ is currently deferred.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS 1. Facility-wide Requirements

SMAQMD Rule 201 - General Permit Requirements

SIP approved: 07-13-1987 (52 FR 26148)
11-20-1984 rule version is SIP approved
08-24-2006 rule version is the current version and is not SIP approved

Rule Description: This rule provides an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of permits.

Compliance Status: Kiefer Landfill has active permits for all sources that require permits.

SMAQMD Rule 202 - New Source Review

SIP approved: SIP approval of 11-20-1984 rule version was withdrawn on 08-19-2011
10-28-2010 rule version is the current version and is not SIP approved
This Rule is not Federally enforceable

Rule Description: This rule sets the procedures for review of new and modified stationary sources and provides the mechanisms for evaluating the applicability of BACT and offset requirements.

Compliance Status: Processes at Kiefer Landfill that require SMAQMD permits have been reviewed pursuant to this rule. BACT and emission offsets have been provided as required by the rule.

SMAQMD Rule 207 - Title V Federal Operating Permits

SIP approved: 11-21-2003 (68 FR 65637) (as part of Title V program approval)
04-26-2001 rule version is SIP approved

Rule Description: This rule sets forth the procedures for review, issuance and renewal of Title V operating permits.

Compliance Status: Kiefer Landfill has submitted a timely and complete Title V application for Title V permit renewal and is currently operating under an active Title V permit.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS 1. Facility-wide Requirements (continued)

SMAQMD Rule 214 - Federal New Source Review

SIP Approved: 07-20-2011 (76 FR 43183)

Rule Description: This rule sets the procedures for review of emissions units at new and modified major stationary sources and provides the mechanisms for evaluating the applicability of BACT and/or offset requirements.

Compliance Status: This is a recently adopted and SIP approved rule. The facility's equipment will be reviewed pursuant to this rule for all future permitting actions.

SMAQMD Rule 301 - Permit Fees - Stationary Source

SIP approved: Rule adopted 10-27-2005
Latest rule revision 08-01-08

The rule is not SIP approved but the portions of the rule related to Title V permit fees are applicable because they are part of the SMAQMD Title V Federal Operating Permit program approved by U.S. EPA on 11-21-2003 (68 FR 65637).

Rule Description: This rule requires the facility to pay fees associated with the issuance and renewal of Title V permits.

Compliance Status: The permittee has paid permit fees as required and is in compliance.

SMAQMD Rule 401 - Ringelmann Chart

SIP approved: 02-01-1984 (49 FR 3987)
04-19-1983 rule version is SIP approved

Rule Description: This rule regulates the discharge of air contaminants into the atmosphere by limiting visible emissions.

Compliance Status: All equipment is expected to comply with the visible emissions requirement.

SMAQMD Rule 403 - Fugitive Dust

SIP approved: 12-05-1984 (49 FR 47490)
08-03-1977 rule version is SIP approved

Rule Description: This rule regulates processes which may periodically cause fugitive dust emissions into the atmosphere.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS 1. Facility-wide Requirements (continued)

Compliance Status: The facility complies with this rule by taking the necessary precautions to ensure that fugitive dust is not airborne beyond the property line.

SMAQMD Rule 442 - Architectural Coatings

SIP approved: 11-09-1998 (63 FR 60214)
09-05-1996 rule version is SIP approved
05-24-2001 rule version is the current version and is not SIP approved

Rule Description: This rule limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application or manufactured for use within the SMAQMD.

Compliance Status: The affected coatings used by the facility are received and stored in containers that display the required manufacturer's labels and demonstrate compliance with the rule's requirements.

SMAQMD Rule 466 - Solvent Cleaning

SIP approved: 05-05-2010 (75 FR 24406)
10-28-2010 rule version is SIP approved

Rule Description: This rule reduces the emissions of volatile organic compounds from solvent cleaning operations and activities, and from the storage and disposal of new and spent cleaning solvents.

Compliance Status: The affected architectural coating application equipment solvent cleaning materials used by the facility are received and stored in containers that display the required manufacturer's labels and demonstrate compliance with the rule's requirements.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS 1. Facility-wide Requirements (continued)

SMAQMD Rule 701 - Emergency Episode Plan

SIP approved: 09-05-2000 (65 FR 53602):

Rule Description: This rule requires a plan be prepared for specific actions to be taken when health related levels of ozone, Carbon Monoxide or PM10 are exceeded and is applicable to sources exceeding 50 tons of VOC or NOx or 100 tons of CO or PM.

Compliance Status: The permittee has prepared the required Emergency Episode Plan and will take the actions required in the plan when notified by the Air Pollution Control Officer of elevated pollutant levels.

40 CFR 68 (begin at 68.1) - Chemical Accident Prevention Provisions

Promulgated: 01-31-1994 (59 FR 4493)
[04-09-2004 (69 FR 18831) most recent amendment]

Rule Description: This regulation specifies requirements for owners or operators of stationary sources concerning the prevention of accidental chemical releases.

An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, must comply with the requirements of 40 CFR Part 68.

40 CFR 68.215 requires that the air permitting authority include in the Title V permit for a facility specified statements regarding the regulation. Those statements are included in the Federally Enforceable Requirements - General section of the permit.

Compliance Status: The permittee stores more than the designated amounts of the specified chemical substances in 40 CFR 68 and is in compliance with the requirements of the regulation.

40 CFR 82 Subpart F (begin at 82.150) - Protection of Stratospheric Ozone - Recycling and Emissions Reduction:

Promulgated: 05-14-1993 (58 FR 28712)
[04-13-2005 (70 FR 19278) most recent amendment]

Rule Description: The purpose of this subpart is to reduce emissions of class I and class II refrigerants and their substitutes to the lowest achievable level by maximizing the recapture and recycling of such refrigerants during the service, maintenance, repair and disposal of appliances and restricting the sale of

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS 1. Facility-wide Requirements (continued)

refrigerants consisting in whole or in part of a class I and class II ODS in accordance with Title VI of the Clean Air Act.

This subpart applies to any person servicing, maintaining or repairing appliances. This subpart also applies to persons disposing of appliances, including small appliances and motor vehicle air conditioners. In addition, this subpart applies to refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturers of recycling and recovery equipment, approved recycling and recovery equipment testing organizations, persons selling class I or class II refrigerants or offering class I or class II refrigerants for sale and persons purchasing class I or class II refrigerants.

As indicated in 40 CFR 70.6, Title V permits need to assure compliance with all applicable requirements at the time of permit issuance. Part 70 defines as an applicable requirement, "Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the Act, unless the Administrator has determined that such requirements need not be contained in a Title V permit." [40 CFR 70.2(12)]. The applicable requirements of Title VI are included in the Federally Enforceable Requirements - General section of the permit.

Compliance Status: The permittee employs qualified contractors to maintain equipment that contains class I or class II refrigerants.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

a. Combustion Sources Only

(5) IC Engines, LFG Fueled

(2) Flares, LFG

(2) IC Engines, Trommels

(2) IC Engines, Auxiliary, Street Sweepers

(1) IC Engine, Standby, Electrical Generator

SMAQMD Rule 406 - Specific Contaminants

SIP approved: 12-05-1984 (49 FR 47490)
12-06-1978 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds and combustion contaminants by limiting emission concentrations.

Compliance Status: The combustion equipment is expected to emit SO₂ at less than 0.001% SO₂ by volume, and PM₁₀ at less than 0.001 grains/dscf at 12% CO₂.

See Attachment A for calculation of SO₂ and PM emission concentrations.

The rule emission limits for SO₂ are 0.2% SO₂ by volume and for PM are 0.1 grains/dscf at 12% CO₂, respectively. The emissions from the flares and IC engines at the permittee's facility comply with this rule.

SMAQMD Rule 420 - Sulfur Content of Fuels

SIP approved: 12-05-1984 (49 FR 47490)
08-13-1981 rule version is SIP approved

Rule Description: This rule limits the sulfur content of gaseous fuels to less than 50 grains per 100 cubic feet and for liquid fuels less than 0.5 percent by weight.

Compliance Status: The landfill gas from the Kiefer Landfill has a sulfur content of 16 grains per 100 cubic feet and complies with the requirements of the rule.

The diesel fuel used in the (5) IC engines for the trommel screens, street sweepers and emergency electrical generator is CARB diesel with a sulfur content of less than 0.5% by weight.

<p>K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS</p> <p>2. Equipment Specific Requirements</p> <p>b. Landfill and Landfill Gas Collection System</p>
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40 CFR 60 Subpart WWW (begin at 60.750) - Standards of Performance for Municipal Solid Waste Landfills:

Promulgated: 03-12-1996 (61 FR 9919)

Rule Description: Subpart WWW limits emissions of NMOC from municipal solid waste landfills with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and with NMOC emissions greater than 50 megagrams/year where construction, reconstruction or modification was commenced on or after May 30, 1991.

There was a modification at the Kiefer Landfill (as defined in 40 CFR 60.751) on or after May 30, 1991. The volume design capacity of the landfill was increased by the modification of the permit issued by the Local Enforcement Agency (Environmental Management Department, County of Sacramento) dated May 10, 1999. Therefore 40 CFR 60 Subpart WWW and not Subpart Cc (Emission Guidelines) applies to the Landfill and Landfill Gas Collection System.

Subpart WWW requirements for the Landfill and Landfill Gas Collection System include:

1. Collection of landfill gas by the use of wells in the landfill.
2. The wells must collect the landfill gas at a rate that doesn't allow methane concentration at the surface of the landfill to exceed 500 ppmv above background.
3. The collected landfill gas must be directed to an air pollution control device or landfill gas treatment system.
4. Wells must be monitored monthly for temperature and oxygen concentration.
5. The surface of the landfill must be monitored quarterly for methane.
6. Recordkeeping for operational parameters.
7. Reporting of monitored data and exceedances of operating parameters.

Compliance Status: Kiefer Landfill is currently in compliance with the requirements of 40 CFR 60 Subpart WWW.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

b. Landfill and Landfill Gas Collection System (continued)

This SMAQMD rule is discussed here to clarify that it does not apply to the Landfill and Landfill Gas Collection System.

SMAQMD Rule 485 - Municipal Landfill Gas

SIP approved: Rule 485 was approved September 23, 1999 (64 FR 51447), with an effective date of November 22, 1999, as part of the California State Plan for implementing the Emission Guidelines (40 CFR 60 Subpart Cc) applicable to existing municipal solid waste landfills (also known as a Federal Clean Air Act 111(d) plan).

Rule Description: This rule limits emissions of NMOC from municipal solid waste landfills with NMOC emissions greater than 50 megagrams/year. The rule requirements incorporate the requirements of the Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills 40 CFR 60 Subpart Cc.

SMAQMD Rule 485 Section 110 provides an exemption from the requirements of the rule for "any MSW landfill that is subject to the requirements of the New Source Performance Standard Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills (40 CFR 60.750)..."

The Kiefer Landfill and Landfill Gas Collection System is subject to 40 CFR 60 Subpart WWW and is therefore exempt from SMAQMD Rule 485.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart Cc (begin at 60.30c) - Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills:

Promulgated: 03-12-1996 (61 FR 9919)

Rule Description: Subpart Cc limits emissions of NMOC from existing municipal solid waste landfills with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and with NMOC emissions greater than 50 megagrams/year where **no** construction, reconstruction or modification was commenced on or after May 30, 1991.

There has been a modification at the Kiefer Landfill (as defined in 40 CFR 60.751) on or after May 30, 1991. The volume design capacity of the landfill was increased by the modification of the permit issued by the Local Enforcement Agency (Environmental Management Department, County of Sacramento) dated May 10, 1999. Therefore Subpart Cc does not apply to

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

b. Landfill and Landfill Gas Collection System (continued)

the Landfill and Landfill Gas Collection System.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 64 (begin at 64.1) Compliance Assurance Monitoring:

Promulgated: 10-22-1997 (52 FR 54940)

Rule Description: The Compliance Assurance Monitoring regulation applies to pollutant-specific emissions units at a major source if the unit satisfies all of the following criteria:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section;”
[40 CFR 64.2(a)(1)]

“The unit uses a control device to achieve compliance with any such emission limitation or standard; and”
[40 CFR 64.2(a)(2)]

“The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount to be classified as a major source. For purposes of this paragraph, “potential pre-control device emissions” shall have the same meaning as “potential to emit,” as defined in §64.1, except that emission reductions achieved by the applicable control device shall not be taken into account.”
[40 CFR 64.2(a)(3)]

Section 64.2(b)(i) states that the requirements of this part shall not apply to any emission limitations or standards proposed after November 15, 1990. Emission limitation or standard means any applicable requirements that constitutes an emission limitation, emission standard, standard of performance or means of emission limitation under the Act.

The landfill is subject to 40 CFR Subpart WWW, which was promulgated in 1996. Therefore, the landfill is exempt from 40 CFR Part 64.

<p>K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS 2. Equipment Specific Requirements b. Landfill and Landfill Gas Collection System (continued)</p>
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SMAQMD Permit to Operate No. 17821 (Rev 01):

Permit Conditions No. 1 and No. 3 are not federally enforceable. All other conditions of the permit are federally enforceable since they are requirements of SIP approved rules and/or federal NSPS and NESHAP. Kiefer Landfill is currently in compliance with all the conditions of SMAQMD Permit to Operate No. 17821(Rev 01).

<p>K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS</p> <p>2. Equipment Specific Requirements</p> <p>c. (2) Flares, Landfill Gas</p>

40 CFR 60 Subpart WWW (begin at 60.750) - Standards of Performance for Municipal Solid Waste Landfills:

Promulgated: 03-12-1996 (61 FR 9919)

Rule Description: 40 CFR 60 Subpart WWW limits emissions of NMOC from municipal solid waste landfills with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and with NMOC emissions greater than 50 megagrams/year where construction, reconstruction or modification was commenced on or after May 30, 1991.

There was a modification at the Kiefer Landfill (as defined in 40 CFR 60.751) on or after May 30, 1991. The volume design capacity of the landfill was increased by the modification of the permit issued by the Local Enforcement Agency (Environmental Management Department, County of Sacramento) dated May 10, 1999. Therefore 40 CFR 60 Subpart WWW and not Subpart Cc (Emission Guidelines) applies to the Landfill Gas Flare.

40 CFR 60 Subpart WWW requirements for the Landfill Gas Flares include:

1. Landfill gas destruction must be 98% or greater or emissions must be less than 20 ppmvd as hexane at 3% O₂.
2. A temperature monitoring device at a specific location in the flare exhaust and operation of the flare at a minimum temperature determined by source testing.
3. Recordkeeping for operational parameters.
4. Reporting of monitored data and exceedances of operating parameters.

Compliance Status: The Kiefer Landfill gas flares are currently in compliance with the requirements of 40 CFR 60 Subpart WWW.

40 CFR 63 Subpart AAAA (begin at 63.1930) - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills:

Promulgated: 03-12-1996 (61 FR 9919)

Rule Description: 40 CFR 63 Subpart AAAA limits emissions of hazardous air pollutants (HAP) from municipal solid waste landfills that are a major source of HAP (i.e. greater than 10 tons/year of a single HAP or greater than 25 tons/year of total HAP).

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

c. (2) Flares, Landfill Gas (continued)

40 CFR 63 Subpart AAAA requirements for the Landfill Gas Flare are the same as 40 CFR 60 Subpart WWW requirements but also include:

1. The development of a Startup, Shutdown and Malfunction (SSM) Plan.
2. Taking actions specified in the SSM Plan when applicable.
3. Recordkeeping related to the SSM Plan.
4. Reporting related to the SSM Plan.

Compliance Status: The Landfill gas Flares are currently in compliance with the requirements of 40 CFR 63 Subpart AAAA.

The following SMAQMD rule is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

SMAQMD Rule 485 - Municipal Landfill Gas

SIP approved: Rule 485 was approved September 23, 1999 (64 FR 51447), with an effective date of November 22, 1999, as part of the California State Plan for implementing the Emission Guidelines (40 CFR 60 Subpart Cc) applicable to existing municipal solid waste landfills (also known as a Federal Clean Air Act 111(d) plan).

Rule Description: This rule limits emissions of NMOC from municipal solid waste landfills with NMOC emissions greater than 50 megagrams/year. The rule requirements incorporate the requirements of the Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills 40 CFR 60 Subpart Cc.

SMAQMD Rule 485 Section 110 provides an exemption from the requirements of the rule for "any MSW landfill that is subject to the requirements of the New Source Performance Standard Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills (40 CFR 60.750)...".

The Landfill Gas Flares are subject to 40 CFR 60 Subpart WWW and are therefore exempt from SMAQMD Rule 485.

<p>K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS</p> <p>2. Equipment Specific Requirements</p> <p>c. (2) Flares, Landfill Gas (continued)</p>

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart Cc (begin at 60.30c) - Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills:

Promulgated: 03-12-1996 (61 FR 9919)

Rule Description: Subpart Cc limits emissions of NMOC from existing municipal solid waste landfills with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and with NMOC emissions greater than 50 megagrams/year where **no** construction, reconstruction or modification was commenced on or after May 30, 1991.

There has been a modification at the Kiefer Landfill (as defined in 40 CFR 60.751) on or after May 30, 1991. The volume design capacity of the landfill was increased by the modification of the permit issued by the Local Enforcement Agency (Environmental Management Department, County of Sacramento) dated May 10, 1999. Therefore Subpart Cc does not apply to the (2) Landfill Gas Flares.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 64 (begin at 64.1) Compliance Assurance Monitoring:

Promulgated: 10-22-1997 (52 FR 54940)

Rule Description: The Compliance Assurance Monitoring regulation applies to pollutant-specific emissions units at a major source if the unit satisfies all of the following criteria:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section;”
[40 CFR 64.2(a)(1)]

"The unit uses a control device to achieve compliance with any such emission limitation or standard; and"
[40 CFR 64.2(a)(2)]

“The unit has potential pre-control device emissions of the

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

c. (2) Flares, Landfill Gas (continued)

applicable regulated air pollutant that are equal to or greater than 100 percent of the amount to be classified as a major source. For purposes of this paragraph, "potential pre-control device emissions" shall have the same meaning as "potential to emit," as defined in §64.1, except that emission reductions achieved by the applicable control device shall not be taken into account."

[40 CFR 64.2(a)(3)]

Section 64.2(b)(i) states that the requirements of this part shall not apply to any emission limitations or standards proposed after November 15, 1990. Emission limitation or standard means any applicable requirements that constitute an emission limitation, emission standard, standard of performance or means of emission limitation under the Act.

The flares are subject to 40 CFR Subpart WWW, which was promulgated in 1996. Therefore, the flares are exempt from 40 CFR Part 64.

SMAQMD Permits to Operate No. 23110 and 23111:

Permit Conditions No. 1 and No. 3 are not federally enforceable. All other conditions of the permit are federally enforceable since they are requirements of SIP approved rules and/or federal NSPS and NESHAP. Kiefer Landfill is currently in compliance with all the conditions of SMAQMD Permits to Operate Nos. 23110 and 23111.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

d. (5) IC Engines, Landfill Gas Fueled

SMAQMD Rule 412 - Stationary Internal Combustion Engines Located at Major Stationary Sources of NOx:

SIP approved: 04-30-96 (61 FR 18959):

Rule Description: This rule limits emissions of NOx, CO and non-methane hydrocarbons (NMHC) from internal combustion engines located at major stationary sources of NOx.

Compliance Status: The rule limits the emission concentration of NOx to 65 ppmv at 15% O2, CO to 4000 ppmv at 15% O2 and NMHC to 750 ppmv at 15% O2. These IC engines are expected to emit NOx and CO at the rate of 0.40 and 2.55 g/hp-hr respectively. This equates to approximately 35 ppmv at 15% O2 for NOx and 366 ppmv at 3% O2 for CO.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart JJJJ (begin at 60.4230) – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines:

Promulgated: 01-18-2008 (73 FR 3591)

Rule Description: This federal regulation limits the emissions from new Reciprocating Internal Combustion Engines (RICE). This NSPS is applicable to any of the following:

1. Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.
2. Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:
 - (i) On or after July 1, 2008; or
 - (ii) On or after January 1, 2009, for emergency engines.
3. Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:
 - (i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

d. (5) IC Engines, Landfill Gas Fueled (continued)

- (ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;
 - (iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or
 - (iv) On or after January 1, 2009, for emergency engines.
4. Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:
- (i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);
 - (ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;
 - (iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or
 - (iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).
5. Owners and operators of stationary SI ICE that commence modification or reconstruction after June 12, 2006.
- (b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand.

Compliance Status: The engines were constructed before June 12, 2006 and have not been reconstructed or modified (as defined in 40 CFR Part 60 Subpart A section 60.2) since then. Therefore, the engines are not subject to this subpart.

40 CFR 63 Subpart ZZZZ (begin at 63.6580) - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE):

Promulgated: 06-15-2004 (69 FR 33473)

Rule Description: This regulation limits the emissions of HAP from stationary Reciprocating Internal Combustion Engines (RICE) located at area and major sources of HAPs.

Compliance Status: This NESHAP is applicable to new and existing RICE with a rating of more than 500 BHP located at a major source of HAP emissions. Pursuant to the facility, they are a major source of HAP emissions. Per 40 CFR 63.6590(a)(1)(i), a stationary RICE located at a major source of HAP emissions is considered existing if construction or reconstruction is commenced before December 19, 2002. If it was constructed or reconstructed after December 19, 2002, it is considered new (40 CFR 63.6590(a)(2)(i)).

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

d. (5) IC Engines, Landfill Gas Fueled (continued)

LFG IC engines 1, 2 and 3 were installed at the facility before December 19, 2002. Pursuant to 40 CFR 63.6590(a)(3)(v), existing RICE with a rating of more than 500 BHP located at a major source of HAP that combust landfill gas equivalent to 10% or more of gross heat input on an annual basis are exempt from the requirements of this subpart. IC engines 1, 2 and 3 are only permitted to burn LFG and are therefore exempt from the requirements of this regulation.

LFG IC engines 4 and 5 were installed at the facility after December 19, 2002 and are fired exclusively on LFG. Per 40 CFR 63.6590(b)(2), the engines are subject to the following requirements:

1. 40 CFR 63.6645(f) requires an initial notification to be submitted to U.S. EPA. The facility has submitted such notification to U.S. EPA.
2. 40 CFR 63.6625(c) requires fuel meters to monitor the daily fuel usage of the engines to show compliance with the 10% or more LFG heat input fuel usage. Since the engines are only permitted to be fueled on LFG, this requirement is not necessary as confirmed by U.S. EPA contacts for this NESHAP (see Attachment E).
3. 40 CFR 63.6650(g) requires the facility to submit an annual report that includes a compliance demonstration with the 10% or more LFG heat input fuel usage, any deviations from the permit limits and any problems or errors suspected with the meters. Since the IC engines are only fueled with LFG and deviations are reported to EPA in the semiannual compliance reports, these requirements are not necessary as confirmed by U.S. EPA contacts for this NESHAP (see Attachment E).
4. 40 CFR 63.6655(c) requires the facility to keep records of the daily fuel usage. Since the engines are fueled exclusively on LFG, this requirement is not necessary as confirmed by U.S. EPA contacts for this NESHAP (see Attachment E).

The following SMAQMD rule is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

SMAQMD Rule 485 - Municipal Landfill Gas

SIP approved:

Rule 485 was approved September 23, 1999 (64 FR 51447), with an effective date of November 22, 1999, as part of the California State Plan for implementing the Emission Guidelines (40 CFR 60 Subpart Cc) applicable to existing municipal solid waste landfills (also known as a Federal Clean Air Act 111(d) plan).

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

d. (5) IC Engines, Landfill Gas Fueled (continued)

Rule Description:

This rule limits emissions of NMOC from municipal solid waste landfills with NMOC emissions greater than 50 megagrams/year. The rule requirements incorporate the requirements of the Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills 40 CFR 60 Subpart Cc. SMAQMD Rule 485 Section 110 provides an exemption from the requirements of the rule for "any MSW landfill that is subject to the requirements of the New Source Performance Standard Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills (40 CFR 60.750)..."

The (5) Landfill Gas Fueled IC Engines are subject to 40 CFR 60 Subpart WWW because they are part of the Kiefer Landfill that is subject to 40 CFR 60 Subpart WWW. Even though the (5) Landfill Gas Fueled IC Engines qualify for the "treated" landfill gas exemption in 40 CFR 60 Subpart WWW they are still exempt from SMAQMD Rule 485.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart Cc (begin at 60.30c) - Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills:

Promulgated:

03-12-1996 (61 FR 9919)

Rule Description:

Subpart Cc limits emissions of NMOC from existing municipal solid waste landfills with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and with NMOC emissions greater than 50 megagrams/year where **no** construction, reconstruction or modification was commenced on or after May 30, 1991.

There has been a modification at the Kiefer Landfill (as defined in 40 CFR 60.751) on or after May 30, 1991. The volume design capacity of the landfill was increased by the modification of the permit issued by the Local Enforcement Agency (Environmental Management Department, County of Sacramento) dated May 10, 1999. Therefore Subpart Cc does not apply to the (5) Landfill Gas Fueled IC Engines.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

d. (5) IC Engines, Landfill Gas Fueled (continued)

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart WWW (begin at 60.750) - Standards of Performance for Municipal Solid Waste Landfills:

Promulgated: 03-12-1996 (61 FR 9919)

Rule Description: 40 CFR 60 Subpart WWW exempts, from its requirements, those devices that combust collected landfill gas if the landfill gas has been processed by a "treatment system". The relevant sections of 40 CFR 60 Subpart WWW are as follows.

40 CFR 60.752(b)(2)(iii) states:

"Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii) (A), (B) or (C) of this section."

40 CFR 60.752(b)(2)(iii)(C) states:

"Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii) (A) or (B) of this section."

U.S. EPA stated in their Applicability Determination - Control No. 0200019 that:

Approval of the Kiefer Landfill treatment system is contained in the 04-22-2004 letter (see Appendix D) from Douglas McDaniel, Acting Chief, Air Enforcement, U.S. EPA Region 9 to Gregory Gratz, Derenzo and Associates, on behalf of Kiefer Landfill. The treatment system consists of the following:

1. filtering through a 10 micron filter,
2. compression and
3. dewatering

Based on the above information and the fact that the (5) Landfill Gas Fueled IC Engines are required by permit condition to combust only "treated" landfill gas, the IC Engines are not subject to 40 CFR 60 Subpart WWW.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

d. (5) IC Engines, Landfill Gas Fueled (continued)

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 63 Subpart AAAA (begin at 63.1930) - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills:

Promulgated: 01-16-03 (68 FR 2238)

Rule Description: The (5) Landfill Gas Fueled IC Engines are exempt from the requirements of 40 CFR 63 Subpart AAAA for the same reason as they are exempt from 40 CFR 60 Subpart WWW as discussed above.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 64 (begin at 64.1) Compliance Assurance Monitoring:

Promulgated: 10-22-1997 (52 FR 54940)

Rule Description: The Compliance Assurance Monitoring regulation applies to pollutant-specific emissions units at a major source if the unit satisfies all of the following criteria:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section;”
[40 CFR 64.2(a)(1)]

"The unit uses a control device to achieve compliance with any such emission limitation or standard; and"
[40 CFR 64.2(a)(2)]

“The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount to be classified as a major source. For purposes of this paragraph, “potential pre-control device emissions” shall have the same meaning as “potential to emit,” as defined in §64.1, except that emission reductions achieved by the applicable control device shall not be taken into account.”
[40 CFR 64.2(a)(3)]

The IC engines are not equipped with a control device as defined in section 64.1 to achieve an emission limit or standard. Pursuant to section 40 CFR

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

d. (5) IC Engines, Landfill Gas Fueled (continued)

64.2(a)(2), CAM is not required for units which do not use a control device. In addition, pursuant to section 40 CFR 64.2(a)(3), CAM is not required for units with a potential to emit less than the major source level. The potential to emit from each of the LFG IC engines is less than the major source level for each pollutant. Therefore, CAM is not required for each of these units.

SMAQMD Permits to Operate Nos. 23112, 23113, 23114, 23115 and 23116:

Permit Conditions No. 1 and No. 3 are not federally enforceable. All other conditions of these permits are federally enforceable since they are requirements of SIP approved rules. Kiefer Landfill is currently in compliance with all the conditions of SMAQMD Permit to Operate Nos. 23112, 23113, 23114, 23115 and 23116.

<p>K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS</p> <p>2. Equipment Specific Requirements</p> <p>e. Gasoline Dispensing Facility</p>

SMAQMD Rule 448 – Gasoline Transfer into Stationary Storage Containers

SIP Approved: 01-23-1996 (61 FR 1716)
02-02-1995 rule version is SIP approved
02-26-2009 rule version is not SIP approved

Rule Description: This rule limits emissions resulting from the transfer of gasoline into any stationary storage container or delivery vessel, or from the pump-out of gasoline from any stationary storage container, delivery vessel, or vehicle fuel tank.

Compliance Status: The gasoline dispensing facility is in compliance with all the applicable requirements of this rule

SMAQMD Rule 449 – Transfer of Gasoline into Vehicle Fuel Tanks

SIP Approved: 03-24-2003 (68 FR 14156)
09-26-2002 rule version is SIP approved
02-26-2009 rule version is not SIP approved

Rule Description: This rule limits the emissions of gasoline vapors into the atmosphere when motor vehicle fuel tanks are filled.

Compliance Status: The gasoline dispensing facility is in compliance with all the applicable requirements of this rule

SMAQMD Permit to Operate No. 20266:

Permit Conditions No. 1 and No. 3 are not federally enforceable. All other conditions of the permit are federally enforceable since they are requirements of SIP approved rules. The Gasoline Dispensing Facility is currently in compliance with all the conditions of SMAQMD Permit to Operate No. 20266.

<p>K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS</p> <p>2. Equipment Specific Requirements</p> <p>f. (2) IC Engines, Trommel Screen</p>

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart IIII (begin at 60.4200) – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:

Promulgated: 07-11-2006 (69 FR 33473)

Rule Description: This federal regulation limits the emissions from new Reciprocating Internal Combustion Engines (RICE).

Compliance Status: The NSPS states, in 40 CFR 60 Section 60.4219, that “non-road” IC engines are not “stationary” IC engines and therefore the NSPS is not an applicable requirement.

The IC engine has been evaluated as a “non-road” IC engine because it meets the federal definition of “non-road” IC engine. The federal definition is the same as the definition of “non-road” IC engine in SMAQMD Rule 412 Section 212. The IC engine meets the requirements specified in the definition as follows:

212.1 “is not a motor vehicle engine; and”

The IC engines are not used as a motor vehicle engines. The engines each power a trommel screen.

212.2 “is not regulated by a federal New Source Performance Standard promulgated under Section 111 of the Federal Clean Air Act; and”

There is no NSPS applicable to the operation of the IC engines.

212.3 “by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform; and”

The trommel screens and IC engines are mounted on wheels.

212.4 “does not remain at a location for more than 12 consecutive months. Any engine, such as a back-up or stand-by engine, that replaces an engine at a location and is intended to perform the same function as the engine being replaced will be included in calculating the consecutive time period. In that case, the cumulative time of both engines, including the time between the removal of the original engine and installation of the replacement engine, would be counted toward the consecutive residence time period. In addition,

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

f. (2) IC Engines, Trommel Screen (continued)

an engine that is moved from its location but does not need to be moved from its location to perform its function shall be deemed to have remained at a single location. or”

The trommel screens and associated IC engines move from location to location at the landfill. It is necessary to move the trommel screens from location to location in order for them to perform their function.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 63 Subpart ZZZZ (begin at 63.6580) – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE):

Promulgated: 06-15-2004 (69 FR 33473)

Rule Description: This federal regulation limits the emission of HAPs from new Reciprocating Internal Combustion Engines (RICE) at major and area sources.

Compliance Status: This subpart is applicable to stationary compression ignition IC engines. Pursuant to 40 CFR 63.6585(a) and 63.6675 of this regulation, non-road engines are not considered stationary IC engines. Therefore this subpart is not applicable to these engines.

The IC engines have been evaluated as “non-road” IC engines because they meets the federal definition of “non-road” IC engine. The federal definition is the same as the definition of “non-road” IC engine in SMAQMD Rule 412 Section 212. The IC engines meet the requirements specified in the definition as follows:

212.1 “is not a motor vehicle engine; and”

The IC engines are not used as a motor vehicle engines. The engines each power a trommel screen.

212.2 “is not regulated by a federal New Source Performance Standard promulgated under Section 111 of the Federal Clean Air Act; and”

There is no NSPS applicable to the operation of the IC engines.

212.3 “by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to,

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

f. (2) IC Engines, Trommel Screen (continued)

wheels, skids, carrying handles, dolly, trailer, or platform; and”

The trommel screens and IC engines are mounted on wheels.

212.4 “does not remain at a location for more than 12 consecutive months. Any engine, such as a back-up or stand-by engine, that replaces an engine at a location and is intended to perform the same function as the engine being replaced will be included in calculating the consecutive time period. In that case, the cumulative time of both engines, including the time between the removal of the original engine and installation of the replacement engine, would be counted toward the consecutive residence time period. In addition, an engine that is moved from its location but does not need to be moved from its location to perform its function shall be deemed to have remained at a single location. or”

The trommel screens and associated IC engines move from location to location at the landfill. It is necessary to move the trommel screens from location to location in order for them to perform their function.

The following SMAQMD rule is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

SMAQMD Rule 412 - Stationary Internal Combustion Engines Located at Major Stationary Sources of NOx

SIP approved: 04-30-96 (61 FR 18959):
06-01-1995 rule version is SIP approved

Rule Description: This rule limits emissions of NOx, CO and non-methane hydrocarbons (NMHC) from internal combustion engines located at major stationary sources of NOx.

Compliance Status: SMAQMD Rule 412 Section 114 provides an exemption from the requirements of the rule for "nonroad internal combustion engines". The IC engines associated with the Trommel Screens meet the definition of nonroad IC engine in SMAQMD Rule 412 Section 212. The IC engines meet the requirements specified in the definition as follows:

212.1 “is not a motor vehicle engine; and”

The IC engines are not used as motor vehicle engines. The engines each power a trommel screen.

212.2 “is not regulated by a federal New Source Performance Standard

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements
f. (2) IC Engines, Trommel Screen (continued)

promulgated under Section 111 of the Federal Clean Air Act; and”

There is no NSPS applicable to the operation of the IC engines.

212.3 “by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform; and”

The trommel screens and IC engines are mounted on wheels.

212.4 “does not remain at a location for more than 12 consecutive months. Any engine, such as a back-up or stand-by engine, that replaces an engine at a location and is intended to perform the same function as the engine being replaced will be included in calculating the consecutive time period. In that case, the cumulative time of both engines, including the time between the removal of the original engine and installation of the replacement engine, would be counted toward the consecutive residence time period. In addition, an engine that is moved from its location but does not need to be moved from its location to perform its function shall be deemed to have remained at a single location. or”

The trommel screens and associated IC engines move from location to location at the landfill. It is necessary to move the trommel screens from location to location in order for it to perform their function.

Each trommel screen IC Engine is therefore exempt from SMAQMD Rule 412.

SMAQMD Permits to Operate Nos. 21262 and 22922:

Permit Conditions No. 1 and No. 3 are not federally enforceable. All other conditions of these permits are federally enforceable since they are requirements of SIP approved rules. The Trommel Screen IC Engines are currently in compliance with all the conditions of SMAQMD Permit to Operate Nos. 21262 and 22922.

<p>K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS</p> <p>2. Equipment Specific Requirements</p> <p>g. (2) IC Engines, Auxiliary, Street Sweeper</p>
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The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart IIII (begin at 60.4200) – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:

Promulgated: 07-11-2006 (69 FR 33473)

Rule Description: This federal regulation limits the emissions from new Reciprocating Internal Combustion Engines (RICE).

Compliance Status: The NSPS states, in 40 CFR 60 Section 60.4219, that “non-road” IC engines are not “stationary” IC engines and therefore the NSPS is not an applicable requirement.

The IC engines has been evaluated as “non-road” IC engines because they meet the federal definition of “non-road” IC engine. The federal definition is the same as the definition of “non-road” IC engine in SMAQMD Rule 412 Section 212. The IC engines meet the requirements specified in the definition as follows:

212.1 “is not a motor vehicle engine; and”

The IC engines are not used as motor vehicle engines. Each IC engine powers the vacuum system and sweeper brushes.

212.2 “is not regulated by a federal New Source Performance Standard promulgated under Section 111 of the Federal Clean Air Act; and”

There is no NSPS applicable to the operation of the IC engines.

212.3 “by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform; and”

Each IC engine is mounted on the street sweeper and is therefore transportable.

212.4 “does not remain at a location for more than 12 consecutive months. Any engine, such as a back-up or stand-by engine, that replaces an engine at a location and is intended to perform the same function as the engine being replaced will be included in calculating the consecutive time period. In that case, the cumulative time of both engines, including the time between the removal of the original engine and installation of the replacement engine,

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

g. (2) IC Engines, Auxiliary, Street Sweeper (continued)

would be counted toward the consecutive residence time period. In addition, an engine that is moved from its location but does not need to be moved from its location to perform its function shall be deemed to have remained at a single location. or”

Each IC engine moves with the street sweeper from location to location at and near the landfill to clean the paved roadways.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 63 Subpart ZZZZ (begin at 63.6580) – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE):

Promulgated: 06-15-2004 (69 FR 33473)

Rule Description: This federal regulation limits the emission of HAPs from new Reciprocating Internal Combustion Engines (RICE) at major and area sources.

Compliance Status: This subpart is applicable to stationary compression ignition IC engines. Pursuant to 40 CFR 63.6585(a) and 63.6675 of this regulation, non-road engines are not considered stationary IC engines. Therefore this subpart is not applicable to these engines.

The IC engines have been evaluated as “non-road” IC engines because they meet the federal definition of “non-road” IC engine. The federal definition is the same as the definition of “non-road” IC engine in SMAQMD Rule 412 Section 212. The IC engines meet the requirements specified in the definition as follows:

212.1 “is not a motor vehicle engine; and”

The IC engines are not used as motor vehicle engines. Each IC engine powers the vacuum system and sweeper brushes.

212.2 “is not regulated by a federal New Source Performance Standard promulgated under Section 111 of the Federal Clean Air Act; and”

There is no NSPS applicable to the operation of the IC engines.

212.3 “by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform; and”

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

g. (2) IC Engines, Auxiliary, Street Sweeper (continued)

Each IC engine is mounted on the street sweeper and is therefore transportable.

212.4 “does not remain at a location for more than 12 consecutive months. Any engine, such as a back-up or stand-by engine, that replaces an engine at a location and is intended to perform the same function as the engine being replaced will be included in calculating the consecutive time period. In that case, the cumulative time of both engines, including the time between the removal of the original engine and installation of the replacement engine, would be counted toward the consecutive residence time period. In addition, an engine that is moved from its location but does not need to be moved from its location to perform its function shall be deemed to have remained at a single location. or”

Each IC engine moves with the street sweeper from location to location at and near the landfill to clean the paved roadways.

The following SMAQMD rule is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

SMAQMD Rule 412 - Stationary Internal Combustion Engines Located at Major Stationary Sources of NOx

SIP approved: 04-30-96 (61 FR 18959):
06-01-1995 rule version is SIP approved

Rule Description: This rule limits emissions of NOx, CO and non-methane hydrocarbons (NMHC) from internal combustion engines located at major stationary sources of NOx.

Compliance Status: SMAQMD Rule 412 Section 114 provides an exemption from the requirements of the rule for "nonroad internal combustion engines". The IC engines associated with the Trommel Screens meet the definition of nonroad IC engine in SMAQMD Rule 412 Section 212. The IC engines meet the requirements specified in the definition as follows:

212.1 “is not a motor vehicle engine; and”

The IC engines are not used as motor vehicle engines. Each IC engine powers the vacuum system and sweeper brushes.

212.2 “is not regulated by a federal New Source Performance Standard promulgated under Section 111 of the Federal Clean Air Act; and”

<p>K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS</p> <p>2. Equipment Specific Requirements</p> <p>g. (2) IC Engines, Auxiliary, Street Sweeper (continued)</p>
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There is no NSPS applicable to the operation of the IC engines.

212.3 “by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform; and”

Each IC engine is mounted on the street sweeper and is therefore transportable.

212.4 “does not remain at a location for more than 12 consecutive months. Any engine, such as a back-up or stand-by engine, that replaces an engine at a location and is intended to perform the same function as the engine being replaced will be included in calculating the consecutive time period. In that case, the cumulative time of both engines, including the time between the removal of the original engine and installation of the replacement engine, would be counted toward the consecutive residence time period. In addition, an engine that is moved from its location but does not need to be moved from its location to perform its function shall be deemed to have remained at a single location. or”

Each IC engine moves with the street sweeper from location to location at and near the landfill to clean the paved roadways.

Each street sweeper auxiliary IC Engine is therefore exempt from SMAQMD Rule 412.

SMAQMD Permit to Operate Nos. 21893 & 23105:

Permit Conditions No. 1 and No. 3 are not federally enforceable. All other conditions of the permit are federally enforceable since they are requirements of SIP approved rules. The Auxiliary IC Engines on the street sweepers are currently in compliance with all the conditions of SMAQMD Permit to Operate Nos. 21893 & 23105.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

2. Equipment Specific Requirements

h. (1) IC Engine, Standby, Electrical Generator

40 CFR 60 Subpart IIII (begin at 60.4200) – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:

Promulgated: 07-11-2006 (69 FR 33473)

Rule Description: This federal regulation limits the emissions from new Reciprocating Internal Combustion Engines (RICE).

SUBPART IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is applicable to any of the following:

1. Manufacturers of engines with a displacement of less than 30 liters per cylinder where the model year is 2007 or later for non fire pump engines and the model year listed in Table 3 of this subpart for fire pump engines.
2. Owners or operators of engines that commence construction after July 11, 2005 where the engine is manufactured after April 1, 2006 for a non fire pump engine or for engines manufactured as a certified National Fire Protection Association (NFPA) fire pump after July 1, 2006.
3. Owners and operators of engines that modify or reconstruct their engine after July 11, 2005.

The engine has been manufactured in 2010 and has a displacement of less than 30 liters per cylinder, therefore, the engine is subject to subpart IIII.

Compliance Status: The NSPS requires the following:

1. The engine must meet the non-road standard that is applicable to the engine size and year of manufacture. The engine has been certified to the current tier 3 standard.
2. The fuel used must meet the requirements specified in 40 CFR 80.510(b). The engine is required to use CARB diesel which complies with the aforementioned fuel specification.
3. The engine must have an hour meter installed. The engine will be required to have an hour meter installed.
4. Operation for maintenance purposes shall be limited to 100 hours per year. The engine will be limited to 50 hours per year for maintenance purposes.

40 CFR 63 Subpart ZZZZ (begin at 63.6580) – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE):

Promulgated: 06-15-2004 (69 FR 33473)

Rule Description: This federal regulation limits the emission of HAPs from new Reciprocating Internal Combustion Engines (RICE) at major and area sources.

<p>K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS 2. Equipment Specific Requirements h. (1) IC Engine, Standby, Electrical Generator (continued)</p>

This engine is considered a new RICE since construction will be commenced after June 12, 2006 at an area source and as such is subject to this subpart.

Compliance Status: The requirements of this NESHAP subpart require the engine to comply with the emission requirements specified in 40 CFR 60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines). This engine complies with the aforementioned requirements by being certified to the current tier 3 standard.

SMAQMD Rule 412 - Stationary Internal Combustion Engines Located at Major Stationary Sources of NOx

SIP approved: 04-30-96 (61 FR 18959):
06-01-1995 rule version is SIP approved

Rule Description: This rule limits emissions of NOx, CO and non-methane hydrocarbons (NMHC) from internal combustion engines located at major stationary sources of NOx.

Compliance Status: Section 110 of this rule exempts emergency standby IC engines from the emission limits of this rule. Section 304 requires an hour meter to be installed on the engine. The engine is equipped with an hour meter. Section 501 requires the facility to keep records of the hours of operation. The facility will be required to keep records of hours of operation.

SMAQMD Permits to Operate Nos. 22419:

Permit Conditions No. 1 and No. 3 are not federally enforceable. All other conditions of these permits are federally enforceable since they are requirements of SIP approved rules. The standby IC Engine is currently in compliance with all the conditions of SMAQMD Permit to Operate No. 22419.

L. PERMIT SHIELD

PERMIT SHIELD

None requested by the applicant.

M. TITLE V PERMIT RENEWAL DECISION AND PERMIT CONDITIONS

TITLE V PERMIT CONDITIONS:

It is recommended that the Kiefer Landfill Title V Federal Operating Permit be renewed.

See proposed Title V Federal Operating Permit No. TV2011-10-01 for permit conditions.

Approved by: _____ Date: _____

ATTACHMENT A

SMAQMD Rule 406 Compliance Calculations for Flares and Engines

Calculation of SO₂ and PM Emission Concentrations From Flares and IC Engines

Flares

Flare No. 1

Assumptions for calculations:

Landfill Gas (LFG) F-factor = 9,743 dscf EG (exhaust gas)/MMBTU (source test data)
LFG Heat Content = 426 BTU/scf LFG (source test data)
Outlet Oxygen = 13.2% (source test data)
Outlet Carbon Dioxide = 6.8% (source test data)
SO₂ Emission Factor = 42.4 lb SO₂/MMscf LFG
PM Emission Factor = 7.35 lb PM₁₀/MMscf LFG

Molecular Weight of SO₂ = 64 grams/mole
Standard Molar Volume = 0.8493 dscf/mol (at 68 degrees F and 1 atm)

PM₁₀ concentration (combustion contaminants):

= $\frac{\text{Flare PM}_{10} \text{ mass emission rate (grains/min)}}{\text{Flare volumetric Exhaust Gas flow rate (dscf EG/min)}}$
= $\frac{(7.35 \text{ lb PM}_{10}/\text{MMscf LFG}) (7000 \text{ grains/lb}) (5000 \text{ scf LFG/min})}{(5000 \text{ scf LFG/min}) (426 \text{ BTU/scf LFG}) (9743 \text{ dscf EG/MMBTU})}$
= $\frac{257 \text{ grains PM}_{10}/\text{min}}{20753 \text{ dscf EG/min}}$ **at 0% O₂ based on definition of Fd Factor**
= $\frac{257 \text{ grains PM}_{10}/\text{min}}{56330 \text{ dscf EG/min}}$ **at 13.2% O₂ actual test condition**
= 0.0046 grains PM₁₀/dscf EG **at 6.8% CO₂ actual test condition**
= 0.008 grains PM₁₀/dscf EG **at 12% CO₂**

SO₂ Concentration (%SO₂ by volume):

= $\frac{\text{Flare volumetric SO}_2 \text{ emission rate (scf SO}_2/\text{min)}}{\text{Flare volumetric combustion gas emission rate (dscf EG/min)}}$
= $\frac{(42.4 \text{ lb SO}_2/\text{MMscf LFG}) (453.6 \text{ grams/lb}) (5000 \text{ scf LFG/min}) (0.8493 \text{ ft}^3/\text{g-mole}) (1 \text{ g-mole}/64 \text{ grams})}{(5000 \text{ scf LFG/min}) (426 \text{ BTU/scf LFG}) (9743 \text{ dscf EG/MMBTU})}$
= $\frac{1.276 \text{ scf SO}_2/\text{min}}{20753 \text{ dscf EG/min}}$ **at 0% O₂ based on definition of Fd Factor**
= $\frac{1.276 \text{ scf SO}_2/\text{min}}{56330 \text{ dscf EG/min}}$ **at 13.2% O₂ actual test condition**
= 0.002% SO₂ by volume

Flare No. 2

Assumptions for calculations:

Landfill Gas (LFG) F-factor	=	9,743 ft ³ EG (exhaust gas)/MMBTU (source test data)
LFG Heat Content	=	426 BTU/ft ³ LFG (source test data)
Outlet Oxygen	=	13.2% (source test data)
Outlet Carbon Dioxide	=	6.8% (source test data)
SO ₂ Emission Factor	=	20 lb SO ₂ /MMft ³ LFG (measured as H ₂ S) = 20 x (34 lb H ₂ S/32 lb S) = 21.25 lb SO ₂ /MMft ³ LFG (measured as S)
PM Emission Factor	=	7.35 lb PM ₁₀ /MMft ³ LFG
Molecular Weight of SO ₂	=	64 grams/mole
Standard Molar Volume	=	0.8493 dscf/mol (at 68 degrees F and 1 atm)

PM₁₀ concentration (combustion contaminants):

$$\begin{aligned} &= \frac{\text{Flare PM}_{10} \text{ mass emission rate (grains/min)}}{\text{Flare volumetric Exhaust Gas flow rate (ft}^3 \text{ EG/min)}} \\ &= \frac{(7.35 \text{ lb PM}_{10}/\text{MMft}^3 \text{ LFG}) (7000 \text{ grains/lb}) (4000 \text{ ft}^3 \text{ LFG/min})}{(4000 \text{ ft}^3 \text{ LFG/min}) (426 \text{ BTU/ft}^3 \text{ LFG}) (9743 \text{ ft}^3 \text{ EG/MMBTU})} \\ &= \frac{257 \text{ grains PM}_{10}/\text{min}}{20753 \text{ ft}^3 \text{ EG/min}} \text{ at } 0\% \text{ O}_2 \text{ based on definition of Fd Factor} \\ &= \frac{257 \text{ grains PM}_{10}/\text{min}}{56330 \text{ ft}^3 \text{ EG/min}} \text{ at } 13.2\% \text{ O}_2 \text{ actual test condition} \\ &= 0.0046 \text{ grains PM}_{10}/\text{ft}^3 \text{ EG at } 6.8\% \text{ CO}_2 \text{ actual test condition} \\ &= 0.008 \text{ grains PM}_{10}/\text{ft}^3 \text{ EG at } 12\% \text{ CO}_2 \end{aligned}$$

SO₂ Concentration (%SO₂ by volume):

$$\begin{aligned} &= \frac{\text{Flare volumetric SO}_2 \text{ emission rate (ft}^3 \text{ SO}_2/\text{min)}}{\text{Flare volumetric combustion gas emission rate (ft}^3 \text{ EG/min)}} \\ &= \frac{(21.25 \text{ lb SO}_2/\text{MMft}^3 \text{ LFG}) (453.6 \text{ grams/lb}) (4000 \text{ ft}^3 \text{ LFG/min}) (0.8493 \text{ ft}^3/\text{g-mole}) (1 \text{ g-mole}/64 \text{ g})}{(4000 \text{ ft}^3 \text{ LFG/min}) (426 \text{ BTU/ft}^3 \text{ LFG}) (9743 \text{ ft}^3 \text{ EG/MMBTU})} \\ &= \frac{0.51 \text{ ft}^3 \text{ SO}_2/\text{min}}{16602 \text{ ft}^3 \text{ EG/min}} \text{ at } 0\% \text{ O}_2 \text{ based on definition of Fd Factor} \\ &= \frac{0.51 \text{ ft}^3 \text{ SO}_2/\text{min}}{45058 \text{ ft}^3 \text{ EG/min}} \text{ at } 13.2\% \text{ O}_2 \text{ actual test condition} \\ &= 0.001\% \text{ SO}_2 \text{ by volume} \end{aligned}$$

Calculation of SO₂ and PM Emission Concentrations from Flares and Engines (continued)

LFG IC Engines

Assumptions for calculations:

Landfill gas F-factor	=	9,400 dscf/0.547mmBTU (source test data)
Molecular Weight of SO ₂	=	64 grams/mol
Standard Molar Volume	=	0.8493 dscf/mol (at 68 degrees F and 1 atm)
SO ₂ Emission Factor	=	0.29 grams/hp-hr
PM Emission Factor	=	0.113 grams/hp-hr
Engine Efficiency	=	35% (assumed)
Outlet Carbon Dioxide	=	12% (assumed)

PM₁₀ concentration (combustion contaminants):

$$\begin{aligned} &= \frac{\text{IC Engine PM}_{10} \text{ mass emission rate (grains/hr)}}{\text{IC Engine volumetric combustion gas flow rate (ft}^3/\text{hour)}} \\ &= \frac{(0.113 \text{ grams PM}_{10}/\text{hp hr}) (15.43 \text{ grains/gram}) (4230\text{hp})}{(4230 \text{ hp}) (2546 \text{ BTU/hp hr}) (1 \text{ BTU input}/0.35 \text{ BTU output}) (9400 \text{ E-6 ft}^3/0.547 \text{ BTU})} \\ &= \frac{7375 \text{ grains/hr}}{528,775 \text{ ft}^3/\text{hr}} \\ &= 0.014 \text{ grains/ft}^3 \text{ at } 12\% \text{ CO}_2 \end{aligned}$$

SO₂ Concentration (%SO₂ by volume):

$$\begin{aligned} &= \frac{\text{IC Engine volumetric SO}_2 \text{ emission rate (ft}^3/\text{hp hr)}}{\text{IC Engine volumetric combustion gas emission rate (ft}^3/\text{hp hr)}} \\ &= \frac{(0.29 \text{ grams SO}_2/\text{hp-hr}) (0.8493 \text{ ft}^3/\text{mole}) (1 \text{ mole}/64 \text{ grams})}{(2546 \text{ BTU/hp hr}) (1 \text{ BTU input}/0.35 \text{ BTU output}) (9400 \text{ E-6 ft}^3/0.547 \text{ BTU})} \\ &= \frac{0.00385 \text{ ft}^3/\text{hp hr}}{125 \text{ ft}^3/\text{hp hr}} \\ &= 0.003\% \text{ SO}_2 \text{ by volume} \end{aligned}$$

Diesel IC Engines

Compliance for the four diesel engines will be shown by demonstrating compliance with the engine with the highest PM10 emission factor (street sweeper no. 2 auxiliary engine (SS2)).

Diesel fuel F-factor	= 9,190 dscf/MMBTU at 0% O ₂
Molecular Weight of SO ₂	= 64 grams/mole
Standard Molar Volume	= 0.8493 dscf/mol (at 68 degrees F and 1 atm)
SO ₂ Emission Factor	= 0.05 grams/hp-hour
PM Emission Factor	= 0.22 grams/hp-hour
Engine Efficiency	= 35% (assumed)
Outlet Carbon Dioxide	= 12% (assumed)

PM10 concentration (combustion contaminants):

$$\begin{aligned}
 &= \frac{\text{IC engine PM10 mass emission rate (grains/hour)}}{\text{IC engine volumetric combustion gas flow rate (ft}^3\text{/hour)}} \\
 &= \frac{(0.22 \text{ grams PM10/hp hour}) (15.43 \text{ grains/gram}) (99 \text{ hp})}{(99 \text{ hp})(2546 \text{ BTU/hp hour}) (1 \text{ BTU input}/0.35 \text{ BTU output}) (9190 \text{ E-6 ft}^3\text{/BTU})} \\
 &= \frac{336 \text{ grains/hour}}{6618 \text{ ft}^3\text{/hour}} \quad \text{at 0\% O}_2 \text{ by definition of F factor} \\
 &= \frac{336 \text{ grains/hour}}{23443 \text{ ft}^3\text{/hour}} \quad \text{at 15\% O}_2 \text{ actual operating condition} \\
 &= 0.01 \text{ grains/ft}^3 \quad \text{at 12\% CO}_2
 \end{aligned}$$

SO₂ Concentration (% SO₂ by volume):

$$\begin{aligned}
 &= \frac{\text{IC engine volumetric SO}_2 \text{ emission rate (ft}^3\text{/hp hour)}}{\text{IC engine volumetric combustion gas emission rate (ft}^3\text{/hp hour)}} \\
 &= \frac{(0.005 \text{ grams SO}_2\text{/hp-hour}) (0.8493 \text{ ft}^3\text{/mole}) (1 \text{ mole}/64 \text{ grams}) (99 \text{ hp})}{(99 \text{ hp}) (2546 \text{ BTU/hp hour}) (1 \text{ BTU input}/0.35 \text{ BTU output}) (9190 \text{ E-6 ft}^3\text{/BTU})} \\
 &= \frac{0.0066 \text{ ft}^3\text{/hour}}{6618 \text{ ft}^3\text{/hour}} \quad \text{at 0\% O}_2 \text{ by definition of F factor} \\
 &= \frac{0.216 \text{ ft}^3\text{/hour}}{23443 \text{ ft}^3\text{/hour}} \quad \text{at 15\% O}_2 \text{ actual operating condition} \\
 &= 0.00002\% \text{ SO}_2 \text{ by volume}
 \end{aligned}$$

ATTACHMENT B

**SMAQMD RULES THAT ARE
"APPLICABLE FEDERALLY
ENFORCEABLE REQUIREMENTS"
FOR
KIEFER LANDFILL**

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR KIEFER LANDFILL

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	101	General Provisions and Definitions 09/03/1998 adoption	Yes - no related conditions are included in the permit because of general nature of the rule.
●	●	102	Circumvention 11/29/1983 adoption	Yes - no related conditions are included in the permit because of general nature of the rule.
	●	103	Exceptions 11/29/1983 adoption	No - source does not operate the type of equipment described in this rule.
	●	104	General Conformity 11/03/1994 adoption	No - the rule's purpose is to have the SMAQMD review federal conformity findings.
	●	105	Emission Statement 09/05/1996 adoption	No - actual emissions of ROC and NOx are less than 25 tons/year.
		107	Alternative Compliance	No - it is not a SIP approved rule.
●		108	Minor Violations	No - it is not a SIP approved rule.
●	●	201	General Permit Requirements 11/20/1984 adoption	Yes - no related conditions are included in the permit.

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR KIEFER LANDFILL

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●		202	New Source Review	No - SIP approved 11-20-1984 version was withdrawn 08-19-2011. Current version 10-28-2010 is not SIP approved.
		203	Prevention of Significant Deterioration 01-27-2011 Adoption	Yes - rule became effective 08-19-2011. Projects processed after the effective date shall be evaluated under this rule.
		204	Emission Reduction Credits	No - it is not a SIP approved rule.
		205	Community Bank and Priority Reserve Bank	No - it is not a SIP approved rule.
		206	Mobile and Transportation Source Emission Reduction Credits	No - it is not a SIP approved rule.
●	*	207	Title V Federal Operating Permit Program	Yes - related conditions are included in the permit. (*Although this is not a SIP approved rule it is applicable because it is part of the approved Title V Permit Program.)
		208	Acid Rain	No - it is not a SIP approved rule.

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR KIEFER LANDFILL

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
		209	Limiting Potential to Emit	No - it is not a SIP approved rule.
		210	Synthetic Minor Source Status	No - it is not a SIP approved rule.
		211	MACT at Major Sources of Hazardous Air Pollutants	No - it is not a SIP approved rule.
		214	Federal New Source Review 10-28-2010 Adoption	Yes – rule became effective 08-19-2011. Projects processed after the applicable date shall be evaluated under this rule.
●	*	301	Stationary Source Permit Fees	Yes - related conditions are included in the permit. (*Although this is not a SIP approved rule it is applicable because it is part of the approved Title V Permit Program.)
		302	Hearing Board Fees	No - it is not a SIP approved rule.
		303	Agricultural Burning Permit Fees	No - it is not a SIP approved rule.
		304	Plan Fees	No - it is not a SIP approved rule.

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR KIEFER LANDFILL

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
		305	Environmental Document Preparation and Processing Fees	No - it is not a SIP approved rule.
		306	Air Toxics Fees	No - it is not a SIP approved rule.
●	●	307	Clean Air Act Fees 09/26/2002 adoption	Yes - no related conditions are included in the permit.
●	●	401	Ringelmann Chart 04/05/1983 adoption	Yes - related conditions are included in the permit.
●		402	Nuisance	No - it is not a SIP approved rule.
●	●	403	Fugitive Dust 11/29/1983 adoption	Yes - related conditions are included in the permit.
●	●	404	Particulate Matter 11/20/1984 adoption	Yes - related conditions are included in the permit.
	●	405	Dust and Condensed Fumes 11/29/1983 adoption	Yes - related conditions are included in the permit.

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR KIEFER LANDFILL

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	406	Specific Contaminants 11/29/1983 adoption	Yes - related conditions are included in the permit.
●	●	407	Open Burning 11/29/1983 adoption	Yes - no related conditions are included in the permit.
	●	408	Incinerator Burning 11/29/1983 adoption	No - the source does not operate an incinerator.
	●	409	Orchard Heaters 11/29/1983 adoption	No - the source does not operate orchard heaters.
	●	410	Reduction of Animal Matter 11/29/1983 adoption	No - the source does not operate equipment for the reduction of animal matter.
	●	411	Boiler NOx 08/23/2007 adoption	No - the source does not operate a boiler subject to this rule.
	●	412	Stationary IC Engines at Major Stationary Sources of NOx 06/01/1995 adoption	Yes - related conditions are included in the permit.
	●	413	Stationary Gas Turbines 03/24/2005 version	No - the source does not operate a gas turbine.

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR KIEFER LANDFILL

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	414	Natural Gas Fired Water Heaters 08/01/1996 adoption 03/25/2010 rule version is not SIP approved	No - the source does not operate gas fired water heaters.
●	●	420	Sulfur Content of Fuels 11/29/1983 adoption	Yes - related conditions are included in the permit.
●	●	441	Organic Solvents 11/29/1983 adoption	Yes - no related conditions are included in the permit because of limited applicability.
●	●	442	Architectural Coatings 09/05/1996 adoption 05/24/2001 rule version is not SIP approved	Yes - related conditions are included in the permit.
	●	443	Leaks from Synthetic Organic Chemical and Polymer Manufacturing 09/05/1996 adoption	No - the source does not operate synthetic organic chemical or polymer manufacturing equipment.
	●	444	Petroleum Solvent Dry Cleaning 11/29/1983 adoption	No - the source does not operate petroleum solvent dry cleaning equipment.
	●	446	Storage of Petroleum Products 11/16/1993 adoption	No - the source only stores petroleum products.
	●	447	Organic Liquid Loading	No - the source does not operate organic liquid loading

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR KIEFER LANDFILL

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
			04/02/1998 adoption	equipment.
●		448	Gasoline Transfer into Stationary Storage Containers 02/02/1995 adoption	Yes - related conditions are included in the permit.
●		449	Transfer of Gasoline into Vehicle Fuel Tanks 09/26/2002 adoption	Yes - related conditions are included in the permit.
●		450	Graphic Arts Operations 10/23/2008 adoption	No - the source does not operate a graphic arts process as defined in the rule.
●	●	451	Surface Coating of Miscellaneous Metal Parts and Products 11/29/1983 adoption 10/28/2010 rule version is not SIP approved	Yes - no related conditions are included in the permit because of limited applicability.
●	●	452	Can Coating 09/25/2008 adoption	No - the source does not operate a can coating process.
●		453	Cutback and Emulsified Asphalt Paving Materials 11/29/1983 adoption	No - the source does not manufacture or apply cutback or emulsified asphalt paving materials.

**SMAQMD RULES THAT ARE
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Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●		454	Degreasing Operations 09/25/2008 adoption	No - the source does not operate degreasers subject to this rule.
●		455	Pharmaceuticals Manufacturing 11/29/1983 adoption	No - the source does not manufacture pharmaceuticals.
●		456	Aerospace Coating Operations 09/05/1996 adoption	No - the source does not coat aerospace parts.
●		458	Large Commercial Bread Bakeries 09/05/1996 adoption	No - the source does not produce bread products.
●		459	Automotive, Truck and Heavy Equipment Refinishing Operations 10/02/1997 adoption	No - the source does not refinish vehicles.
●		460	Adhesives and Sealants	No - it is not a SIP approved rule.
●		463	Wood Products Coatings 09/25/2008 adoption	No - the source does not coat wood products.

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR KIEFER LANDFILL

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●		464	Organic Chemical Manufacturing Operations 09/22/2008 adoption	No - the source does not manufacture organic chemicals.
●		465	Polyester Resin Operations 09/25/08 adoption	No - the source does not include any polyester resin operations.
●		466	Solvent Cleaning 10/28/2010 adoption	Yes - related conditions are included in the permit.
		485	Municipal Landfill Gas	No - it is not a SIP approved rule.
●		501	Agricultural Burning 11/29/1983 adoption	No - the source does not conduct agricultural burning.
●		601	Procedure before the Hearing Board	No - it is not a SIP approved rule.
●		602	Breakdown Conditions: Emergency Variance	No - it is not a SIP approved rule.
●		701	Emergency Episode Plan 05/27/1999 adoption	No - no related conditions are included in the permit because of limited applicability.
●		801	New Source Performance Standards	No - it is not a SIP approved rule. Note: there is an equivalent federal regulation.

**SMAQMD RULES THAT ARE
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Rule is Applicable Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
	901	General Requirements	No - it is not a SIP approved rule. Note: there is an equivalent federal regulation.
	902	Asbestos	No - it is not a SIP approved rule. Note: there is an equivalent federal regulation.
	903	Mercury	No - it is not a SIP approved rule. Note: there is an equivalent federal regulation.
	904	Airborne Toxic Control Measures	No - it is not a SIP approved rule. Note: there are equivalent federal regulations for some of the listed ATCMs.
	1002	Fleet Inventory	No - it is not a SIP approved rule.
	1003	Reduced-Emission Fleet Vehicles/Alternative Fuels	No - it is not a SIP approved rule.
	1005	Mobile Source Emission Reduction Credits/Banking	No - it is not a SIP approved rule.

**SMAQMD RULES THAT ARE
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Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
		1006	Transportation Conformity	No - it is not a SIP approved rule.

ATTACHMENT C

SMAQMD Rule 201 Permits To Operate

ATTACHMENT D

U.S. EPA Letter Dated 04-22-2004 RE: Landfill Gas Treatment Systems

ATTACHMENT E

U.S. EPA Correspondence Regarding NESHAP ZZZZ Requirements for LFG Engines Nos. 4 and 5

ATTACHMENT F

Facility Letter Requesting Cancellation of IC Engine (18184) and Associated Grinder (P/O 18185)

ATTACHMENT G

Facility Letter Requesting to Incorporate Recent Modifications Into Title V Permit